Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR RR NAGAR & DASARAHALLI ZONES IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-1)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
1	Volume 1, Page 15 of 233	Clause 3.1.2 Particular Construction Experience, (b) Experience in Key Activities, (i) Experience in Execution of WwTPs	We understand the WwTPs based on MBR (Membrane Bioreactor) Technology with BNR removal shall also be accepted for the Experience in Execution of WwTPs. Kindly Confirm	Not Acceptable, Tender Conditions Prevails.
2	Volume 1, Page 17 of 233	Note no 4 to Clause 3.1.2.	We request you to allow 100% subsidiary company registered in India to use its foreign Parent company Financial and technical qualifications to participate in tender without forming a JV.	Not Acceptable, Tender Conditions Prevails.
3	Volume 1, Page 14 of 233	Clause 3.1.1 General Construction Experience, Financial Years	For foreign companies, financial years are considered as calendar years, i.e. January to December. Thus, we understand that last 5 financial years considered for foreign companies shall be as follows: FY 2023, FY 2022, FY 2021, FY 2020 and FY 2019. Kindly confirm.	For foreign companies audited 5 financial years (FY) i.e.., FY-2023, FY-2022, FY-2021, FY-2020 and FY-2019 will be considered. However, for Indian company the existing clause remains the same.
4	Volume 2/Section 7, Page part 8 - 82	Clause 8.18 Aeration system with allied Equipments	We request you to also accept Helical Hybrid type of Blowers as Process blowers for the Aeration purpose.	Tender Conditions Prevails.
5	Volume-2 /Section-7, Part 5 -30		As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Please confirm.	The design influent parameters requirement shall be as defined Part 5, Cl.no. 5.19.1, "TSPS & WwTPs Design / Sizing Criteria".
6	Volume-2 / Section-7, Part 5 -30	**Influent Wastewater Characteristics** COD mg/L 800	We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being non-biodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at the Works. Please confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.
7	Volume-1 / Page 16 of 233	Construction Experience- Pipeline The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 year as on date of bid submission involving minimum length of 25 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. As per the CPHEEO and prevailing in all states, uPVC pipes are being used upto 250 mm diameter. DWC pipes and CI Pipes are being used beyond 250 mm diameter in sewer networks. Hence, we request you to consider uPVC and CI experience also in addition to DWC/ RCC/ DI construction of pipeline. Please confirm.	For experience purpose CI pipeline construction will also be considered. Refer Addendum-1.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
8	Volume-1 / Page 16 of 233	(vi) Construction Experience Trenchless Works The Tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia. and above MS casing pipe of minimum 100 meters in any one year during the last 5 year as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Please confirm.	Not Acceptable. Tender Conditions Prevails.
9	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) **3.1.2. (b) (i) Experience in Execution of WwTPs** The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of minimum 4 MLD capacity and above, with Biological Nutrient Removal (BNR) technology of process like, A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of One year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified— excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Please confirm.	Refer Addendum-1
10	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 4 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Please confirm.	Yes, technology provider shall also abide to the PQ required defined in Clause 3.1.2. (b) i
11	Volume-2 / Section-7, Part 5 - 49	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Please confirm.	Tender Conditions Prevails.
12	Volume-2 / Section-7, Part 5 - 50	HRT at average flow: 24 Hrs.	Hydraulic Retention Time (HRT) is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
13	Volume-2 / Section-7, Part 5 - 50	Maximum Decanter Weir loading rate: 120 m3/h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 m^3/h/m (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Please confirm.	Tender Conditions Prevails.
14	Volume-2 / Section-7, Part 8 - 99	Decanters (For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Please confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
15	Volume-2 / Section-7, Part 8 - 99	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
16	Volume-2 / Section-7, Part 5 - 51	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document— Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Please confirm.	Tender Conditions Prevails.
17	Volume-2 / Section-7, Part 8 - 82 to Part 8-101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Please confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted. Refer Addendum-1.
18	Volume-2 / Section-7, Part 8 - 90	Si.no. | Description | Material of Construction f | Acoustic enclosure | Al-Zn coated steel, insulated with glass wool	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Please confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
19	Volume-2 / Section-7, Part 8 - 150	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur, 10 Komaghatta, 13 MLD Byrathi Kanne. Therefore, we assume that the tenderer can propose M/s. Yucheon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specifications & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
20	Volume-2 / Section-7, Part 5 - 54	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
21	Volume-2 / Section-7, Part 1 -9 Volume-2 / Section-7, Part 5-30	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD_3 at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
22	Volume-2 / Section-7, Part 8 - 125	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
23	Volume-2 / Section-7, Part 8 - 127	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm	Tender Conditions Prevails.
24	Volume-2 / Section-7, Part 8 – 128	….. the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
25	Volume-2 / Section-7, Part 8 - 138	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Please confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
26	Volume-2 / Section-7, Part 5 - 54	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm.	Tender Conditions Prevails.
27	Volume 2, Page no. TECHNICAL SCHEDULE X-2	a) Energy Consumption for TSPS, WwTP without Reuse PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided in recent tender of BOMMANAHALLI ZONE in 110 village areas for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
28	Volume-2 / Section-7, Part 5 - 53	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Please confirm.	Tender Conditions Prevails.
29	Volume-2 / Section-7, Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Please confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.
30	Volume-2 / Section-7, Part 5 - 38/42/47	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Please confirm.	Tender Conditions Prevails.
31	Volume-2 / Section-7, Part 7 - 54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Please confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
32	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Please confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
33	Volume-2 / Section-7, Part 7 - 56	Historian Software	As alarms and trends are already stored within the computer-based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Please confirm.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
34	Volume -1/3.1.2 (b)(i)	Experience in Key Activities Experience in Key Activities Experience in Execution of WwTPsi. The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos.Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission.	Qualification criteria states that the plants must use one of the listed BNR Technologies as stated above. However, we would like to highlight that the plants which wehave executed utilized Membrane Bioreactor (MBR) technology, which is a more advanced and reliable process compared to MBBR, and it fully meets the effluent discharge standards mentioned in the tender & it is finely operational from previous years. A few key advantages of MBR over MBBR include: • Higher effluent quality suitable for reuse applications • Smaller footprint, ideal for space-constrained sites • Elimination of secondary clarifiers due to membrane-based separation • Greater process stability and operational consistency • Better adaptability to stringent regulatory requirements Considering these points, we kindly request you to consider the plant executed using MBR technology as equivalent to those using MBBR technology under the qualification criteria	Not Acceptable. Tender Conditions Prevails.
35	Volume-2 / Section-7, Part 5 - 30	Influent Wastewater Characteristics pH — 6.5-7.5 BOD — mg/L — 350 COD — mg/L — 800 TSS — mg/L — 450 VSS — mg/L — 360 TKN — mg/L — 70 NH4-N — mg/L — 45 Total Phosphorus — mg/L — 7	As per referred clause in the tender document, For BOD=350 mg/L, the corresponding COD value is 800 mg/L. The COD/BOD ratio is on the higher side. In normal practice BOD= 250 mg/L and COD= 425 mg/L is considered as per CPHEEO. We presume that there are no ingresses of Industrial effluent in the Sewage and the COD is biodegradable. Kindly Confirm.	The design influent parameters requirement shall be as defined Part 5, Cl.no. 5.19.1, "TSPS & WwTPs Design / Sizing Criteria".
36	Volume-2 / Section-7, Part 5 - 30	Influent Wastewater Characteristics COD — mg/L — 800	We presume that there are no ingresses of Industrial effluent in the Sewage and more than 95% of COD is biodegradable and less than 5% of COD is non-biodegradable. Or the treated Effluent COD performance requirements may be relaxed subject to the Contractor proving the presence of non-biodegradable COD in the influent which cannot be treated using the processes provided at the Works Kindly Confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.

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NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR RR NAGAR & DASARAHALLI ZONES IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-1)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
37	Volume-1 / Page 15 of 233	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPs The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of minimum 4 MLD capacity and above, with Biological Nutrient Removal (BNR) technology of process like, A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of One year during the last 5 years as on date of Bid submission.	As per the Tender document, Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i). We understand that the referred clause has mentioned the effluent quality standards at the outlet of STP and not after the secondary treatment process. Therefore, for the purpose of demonstrating compliance, the Technology Provider supplying the secondary treatment process must ensure that the treated effluent meets the following key parameters at the final outlet, as specified in the clause — excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Kindly Confirm.	Refer Addendum-1
38	Volume-1 / Page 15 of 233	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider is required to provide evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP) as per Clause 3.1.2(b)(i). We note that the referred clause does not explicitly mention the required capacity of this reference WWTP. We understand that the Technology Provider must demonstrate having successfully supplied the technology for at least one (1) WWTP of 4 MLD capacity in line with Clause 3.1.2(b)(i). Kindly confirm	Yes, technology provider shall also abide to the PQ required defined in Clause 3.1.2. (b) i
39	Volume-2 / Section-7, Part 5 -49	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the previous tender of BWSSB-i.e. CP25 package and 10 MLD STP at Jakkur project which was based on SBR technology, this particular clause had been deleted. We presume that same shall be followed for the present tender also. Kindly confirm.	Tender Conditions Prevails.
40	Volume-2 / Section-7, Part 5 -50	HRT at average flow: 24 Hrs.	HRT is the derived factor based on the selected SBR cycle time and Inlet characteristics of the sewage. We understand that the HRT shall be as per process requirement and as per recommendation of Technology provider to achieve the outlet sewage characteristics as per tender requirement. Kindly Confirm.	Tender Conditions Prevails.
41	Volume-2 / Section-7, Part 5 -50	Mixing with Air: For pre-zone or selector zone mixing, dedicated coarse bubble diffuser shall be provided with dedicated flow measurement to each pre-zone or selector zone.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no such criteria for air flow measurement to selector zone. Hence, we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails.
42	Volume-2 / Section-7, Part 8 -99	Decanters (For SBR system)	We presume that all decanter specifications shall be acceptable as per the technology providers standard specifications. As bidder has to submit the technology Tie-Up agreement in his technical bid. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
43	Volume-2 / Section-7, Part 8 -99	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	We presume that all decanter mechanism is an integral part of Technology components. Also, bidder has to submit the technology Tie-Up agreement in his technical bid. Therefore, pipe schedule(s) mentioned under decanter specifications are not applicable for decanters. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
44	Volume-2 / Section-7, Part 5 -50	Decanter Weir Length: Minimum decanting flow rate of 1.7 times the average flow shall be considered to calculate the decanter weir length in each basin.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi, This specific criteria was not mentioned. Hence we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails.
45	Volume-2 / Section-7, Part 5 -50	Maximum Decanter Weir loading rate: 120 m3/h/m	In the previous tender of BWSSB-i.e. CP25, CP 26 and CP 27 package based on SBR technology, the Maximum Decanter Weir loading rate was 125 m3/h/m (Addendum-8). We presume that same shall be followed for the present tender also. Kindly confirm.	Tender Conditions Prevails.
46	Volume-2 / Section-7, Part 5 -51	Peak Oxygen Demand Factor: 1.3	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no criteria for Peak Oxygen Demand Factor. Hence we presume that the same criteria is not applicable for this project also. Kindly Confirm.	Tender Conditions Prevails.
47	Volume-2 / Section-7, Part 5 -52	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The given factors in the tender document, Alpha, Beta and Fouling Factor, depend on the diffuser type, MoC, and self-cleaning capacity which can vary within the range given in the latest edition of Metcalf and Eddy. Therefore, we presume that the given factors can be considered as per the latest edition of Metcalf and Eddy to design the aeration system. Kindly Confirm.	Tender Conditions Prevails.
48	Volume-2 / Section-7, Part 8 -82 to Part 8 -101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	In the Tender document, two different Diffuser specifications are given as mentioned in referred clause. We understand that the Diffuser specifications given in the Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment process where diffused aeration is applicable. Kindly Confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted. Refer Addendum-1.
49	Volume-2 / Section-7, Part 5 -52	Process Air Blowers for all Treatment Processes Design SOTE per m depth of water (Minimum to be provided and maximum to be used as design basis) – 5.50 %	The SOTE of the latest advanced diffusers are achieving more than that specified in the tender. Kindly allow us to provide the SOTE as per the diffuser manufacturer's design. The letter from the diffuser manufacturer shall be submitted during detailed engineering stage. Kindly Confirm.	Tender Conditions Prevails.
50	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (h) The bubble should retain a solid spherical shape. The bubbles produced from the diffuser shall be minimum 0.5 mm.	The perforation and bubble size of diffuser may varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly request to accept the perforation and bubble size as per Diffuser Manufacturers Design. Kindly Confirm.	Tender Conditions Prevails.
51	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers .maximum outer diameter (OD) shall not be more than 90 mm.	Kindly request to accept the outer diameter (OD) as per design of Diffuser Manufacturers as specified in the tender document. As the outer diameter (OD) of diffuser varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly Confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
52	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (b) The diffuser shall be fine bubble membrane tube type diffuser consisting of a single piece injection-molded polypropylene/uPVC tube surrounded by a membrane sleeve ……	The provided specifications for diffusers are pertaining to a specific vendor. Therefore, we understand that the diffuser specifications of any approved vendor M/s Environmental Dynamics, M/s OTT GMBH, M/s Rehau Polymer, M/s SSI Aeration mentioned in'CONSOLIDATED Mechanical Equipment VENDOR LIST'shall be acceptable. Kindly confirm.	It has been reconfirmed that the listed vendors in approved list are satisfying the Bid Specification requirements. Hence Tender Conditions Prevails.
53	Volume-2 / Section-7, Part 8-82 & Volume-2 / Section-7, Part 5-8	8-18 Fine Bubble Tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (n) Provide a back-flow prevention device built integrally with the diffuser that prevents backflow into the diffuser and air piping. & Contractor shall provide back flow prevention mechanism / check valve inside each diffuser to prevent intrusion of liquid and/or solids into the diffuser and air piping under normal operating conditions of aeration system.	Many diffuser manufacturers under approved vendor list of the tender provide slits on the membrane which act as a prevention of backflow into the diffuser. These slits automatically get closed when air supply is stopped. We understand that any separate prevention device/mechanism is not required in this case. Also, the same was accepted in CP-25. CP-26 & CP-27 tenders called by BWSSB. Kindly Confirm.	Yes confirmed. Diffuser shall be provided with a back flow prevention device built integrally with the diffuser that prevents backflow or Diffuser membrane slits can also act as a prevention of backflow into the diffuser. Diffuser slits automatically get closed when air supply is stopped into the diffuser and air piping. Refer Addendum-1
54	Volume-2 / Section-7, Part 8 - 90	<table><tr><td>Si.no.</td><td>Description</td><td>Material of Construction</td></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	In recent days various MOC of Acoustic closures for Turbo air blowers are available. Kindly allow tenderer to provide acoustic enclosure for Turbo Blower of MOC as per manufacturer's standard. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
55	Volume-2 / Section-7, Part 8 - 150	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as disc filter supplier In the previously published many tenders by BWSSB such as STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur,10 Komaghatta, 13 MLD ByrathiKanne. Therefore, we presume that the tenderer can propose M/s. Yucheon Make Fiber Disc filter for this tender. Kindly Confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
56	Volume-2 / Section-7, Part 5 -54	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the Design flow for the Disc filter unit shall be maximum incoming flow to the disc filter unit. In the case of SBR system, FDF unit shall be designed with the average flow or the decant flow whichever is higher. Kindly confirm.	Tender Conditions Prevails.
57	Volume-2 / Section-7, Part 1 -9 Volume-2 / Section-7, Part 5-30	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD_3 at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	As per the tender document the required treated effluent quality requirements such as BOD, COD, TSS, TN & TP can be achievable at the outlet of the biological treatment process like SBR. In such cases there shall be no need of Disc filter to be proposed for achieving the treated effluent quality. Hence we understand that the Disc filter shall be provided as per the process requirement. Kindly confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
58	Volume-2 / Section-7, Part 8 -125	Disc Filter	The provided specifications for Disc Filters are pertaining to a specific vendor and this are compiled by only one or two vendor's mentioned in the approved vendor list. Therefore, we understand that the Disc filter specifications shall be acceptable as per approved vendor. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
59	Volume-2 / Section-7, Part 8 - 127	Filter Membrane: Stainless steel screen / Mesh: SS-316L	Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we understand such requirement shall be applicable for this said tender. Kindly Confirm.	Tender Conditions Prevails.
60	Volume-2 / Section-7, Part 8 – 127	….. the automatic valve and suction cleaning pump which shall be	Automatic valves for suction cleaning pump arrangement was not mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we understand such requirement shall not be applicable for this said tender. Kindly Confirm.	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
61	Volume-2 / Section-7, Part 8 - 128	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore, we presume that fully submerged Fiber Disc Filter without cover shall be acceptable. Kindly confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
62	Volume-2 / Section-7, Part 5 -54	DISC Filter building	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore, we presume that fully submerged Fiber Disc Filter without roof shall be acceptable. Kindly confirm.	Tender Conditions Prevails.
63	Volume 2, Page no. TECHNICAL SCHEDULE X-2	a)Energy Consumption for TSPS, WwTP without Reuse PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The said formula for energy consumption shall not be applicable in case the Terminal Sewage Pumping Station as the value is energy consumption value can be arrived on basis sewage quantity pumped and not on pollutant loadings like BOD/TSS/TKN. Therefore, we understand that the formulae provided for determining the energy consumption of ISPS shall be applicable for TSPS as mentioned in recent tender of BOMMANAHALLI ZONE in 110 village areas. Kindly confirm.	Tender Conditions Prevails.
64	Volume-2 / Section-7, Part 5 -53	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender an alum dosing system shall be required for chemical phosphorus removal. We presume that if Total Phosphorous ≤ 1 mg/l as mentioned in the tender is achieved biologically i.e. Biological nutrient removal process then Alum Dosing system shall not be required. Therefore, alum dosing system shall be optional and shall be provided if required as per process requirement to achieve Total Phosphorous as ≤ 1 mg/l. Kindly Confirm.	Tender Conditions Prevails.

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>65</td><td>Volume-2 / Section-7,
Part 5 -18</td><td>5.15 Hydraulic Design Requirement
• Maximum pipe flow velocity shall be no more than 1.0 m/s for all gravity flow and pump suction lines unless specified otherwise.
• Maximum pipe flow velocity shall be no more than 1.5 m/s for all pumped discharge lines unless specified otherwise.
• Calculated normal velocity (at 20°C and 1atm) of air piping shall not be more than 16 m/s.
• For channels, the maximum velocity shall be no more than 1.0 m/s.
• For liquids the maximum velocity through gate opening shall be no more than 1.0 m/s unless specified otherwise.</td><td>In the tender document, mentioned Velocities in tender document are on lower side: Following table shows velocities for various services which are used as per good engineering practices, in many STP's.
<table>
<tr><th>Sr. No.</th><th>Service</th><th>Design Velocity m/s</th><th>Limitations</th></tr>
<tr><td>1</td><td>Gravity Lines for Sewage & Water</td><td>0.6 – 1.2
Designed as pipeline flowing full.</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 1.2 m/sec is allowable at Peak Flow.</td></tr>
<tr><td>2</td><td>Pressure Lines for Sewage & Water</td><td>0.6 – 2.5</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 2.5 m/sec is allowable at Peak Flow.</td></tr>
<tr><td>3</td><td>Air (Pressurized Lines)</td><td>18 – 22</td><td>Max. Velocity shall not be more than 25 m/sec in any section.</td></tr>
<tr><td>4</td><td>Scum & Sludge Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not be less than 150 mm for Gravity Lines.</td></tr>
<tr><td>5</td><td>Chemical Feed Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not less than 20 mm.</td></tr>
</table>
We presume that, above table shall be followed for proposed STPs.
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>66</td><td>Volume-2 / Section-7,
Part 5 -13</td><td>While selecting any type of pump and blower, priority shall be given to higher pump/blower efficiency and lower power consumption and shall ensure that pump/blower can operate at high efficiency throughout its service life. At minimum contractor shall ensure efficiencies of pump/blower as listed below:
• Minimum efficiency of Submersible Pumps for TSPS shall be 70%
• Minimum efficiency of Axial Tubular Pump (MLR) shall be 70%
• Minimum efficiency of RAS Pump (Horizontal/Vertical Non-clog solid handling) shall be 65%.
• Minimum efficiency of Sludge Pump (Progressive Cavity/Screw pump) shall be 45%.
• Minimum efficiency of Rotary Tri-Lobe blower shall be 70%
• Minimum efficiency of Centrifugal Turbo blower shall be 90%</td><td>The efficiency of the various equipment are mostly depends on the suitable model selection for duty condition and Manufacturer's design.
Therefore, kindly accept the efficiency of the various equipment as per design of manufacturer.
Kindly Confirm.</td><td>Refer Addendum-1</td></tr>
<tr><td>67</td><td>Volume-2 / Section-7,
Part 3-13 & 3-14</td><td>3.16.4 Bid Drawings and Details
(a) General and Process.
(b) Mechanical
(c) Electrical & Instrumentation</td><td>Tender specifies vast submission of documents. It is not possible to submit all these documents at bidding stage.
We understand that submittals given under the head a) General and Process shall be submitted during the bidding stage. All other documents shall be submitted after award of contract.
Kindly confirm.</td><td>The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.</td></tr>
<tr><td>68</td><td>Volume – 4 Drawings</td><td>Proposed Plot Plan</td><td>Kindly request to provide the proposed plot plan in AutoCAD format.</td><td>Refer Addendum-1</td></tr>
<tr><td>69</td><td>Volume-2 / Section-7,
Part 5 -38
Volume-2 / Section-7,
Part 5 -42
Volume-2 / Section-7,
Part 5 -47</td><td>SECONDARY CLARIFIERS (EA PROCESS)
SECONDARY CLARIFIERS (IFAS PROCESS)
SECONDARY CLARIFIERS (MBBR PROCESS)</td><td>Tendermentions that, bidder shall provide calculations for operating the WwTP at Design Flows with 1 tank/unit/module offline for maintenance.
We presume that the same is applicable for secondary clarifiers as well.
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
</table>

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<tr><td>70</td><td>Volume-2 / Section-7,
Part 8 –104</td><td>8.20 Primary/Secondary Clarifiers</td><td>We understand that all wetted part of Primary/Secondary Clarifiers shall be of SS 316L considering the 10 years of operation and maintenance.
Kindly Confirm.</td><td>Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.</td></tr>
<tr><td>71</td><td>Volume-2 / Section-7, Part 5- 9</td><td>The floors of all liquid-holding structures shall be appropriately sloped and trenches and drain sumps shall be provided at the bottoms of such slopes to facilitate complete drainage of liquid……</td><td>Generally, slope is not required in aeration basin. RAS/SAS pump pit shall be provided in aeration basins for sludge collection and pumping.
If slope is provided, it will affect the diffuser grid installation, alignment and performance.
Kindly Confirm.</td><td>The slope requirement shall be as per the tender requirement. And bidder can propose very mild slope may be of 1:5000.</td></tr>
<tr><td>72</td><td>Volume-2 / Section-7, Part 5- 9</td><td>For liquid-holding structures, the drain piping and fittings shall be sized such that the entire structure can be drained by gravity in no more than eight (8) hours.</td><td>We understand that this requirement is not applicable to aeration tank.
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>73</td><td>Volume-2 / Section-7, Part 5- 9</td><td>The Plant Drain Pumping Station, Plant Drain Pumps, and other related equipment and controls shall be designed and sized to allow draining of the structure with the largest volume from full to empty within eight (8) hours.</td><td>We understand that this requirement is not applicable to aeration tank.
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>74</td><td>General</td><td>MOC Of Pipe line for Various Applications</td><td>MOC for pipe line are missing in the tender document. We request you to allow us to provide following MoCs for Various applications:
<table>
<tr><th>Sr. No.</th><th>Service</th><th>Type of Flow</th><th>MOC</th></tr>
<tr><td>1</td><td>Waste Water / Sludge</td><td>Gravity</td><td>RCC NP-3 Class</td></tr>
<tr><td>2</td><td>Waste Water / Sludge</td><td>Gravity/Pressurized</td><td>CI Class "LA" / DI K-9</td></tr>
<tr><td>3</td><td>Service Water</td><td>Gravity/ Pressurized</td><td>GI "C" Class</td></tr>
<tr><td>4</td><td>Air Lines: Headers, Vertical Downcomers</td><td>Pressurized</td><td>Above Water: MS Sand/Shot Blasted, Epoxy Painted Under Water: SS 304</td></tr>
<tr><td>5a</td><td>Air Grid Piping: Aeration Zone</td><td>Pressurized</td><td>UPVC Schedule 40</td></tr>
<tr><td>5b</td><td>Air Grid Piping: Selector Zone</td><td>Pressurized</td><td>SS 304</td></tr>
<tr><td>6</td><td>Chemicals</td><td>Gravity/ Pressurized</td><td>SS 304 except Chlorine & FeCl3</td></tr>
<tr><td>7</td><td>Chlorine & FeCl3</td><td>Gravity/ Pressurized</td><td>Schedule 40 UPVC</td></tr>
</table>
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>75</td><td>Volume-2 / Section-7,
Part7 -54</td><td>PLC shall be provided as a Hot Stand-by Controller</td><td>We understand that redundant PLC has been specified to avoid long interruption in the plant operation & controls. Alternatively, it can also be achieved by providing normal non-redundant PLC along with spares such as pre-programmed PLC hardware like CPU, Power supply etc. In the unlikely event of PLC system failure, the same can be made functional within 1-2 hrs with the help of the spares. Kindly confirm that we can consider non-redundant PLC with required spares.</td><td>Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.</td></tr>
</table>

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
76	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	Operator available in STP plant are not skilled to do programming of SCADA system and it is dangerous to do changes in SCADA with them. For this Expert programmer is required, who always carry required licenses with them. Hence, we request you to consider runtime software for SCADA.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
77	Volume-2 / Section-7, Part 7 -56	Historian Software	Alarm & trends are store in computer-based SCADA with inbuilt capability SQL server, hence separate system is not required to store data. We request you to consider PLC & SCADA system without Historian.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
78	Qualification of the Tenderer: 3.1.1 General Construction Experience: & 3.1.2 Particular Construction Experience	General & Technical Qualification of Tenderer required in last 05 years.	We kindly request you to consider General & Technical Qualification in Last 07 years. As in all other government and semi government organization last 07 years is allowed for similar type of major projects	Not Acceptable. Tender Conditions Prevails.
79	3.1.2 Particular Construction Experience	(i) Experience in Execution of WwTPs i. The Tenderer as a sole entity or a lead partner and or partner in a joint venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing and Commissioning of all Civil, Mechanical, Electrical and Instrumentation works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos. Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like A2O, EA, IFAS, MBBR, SBR with SCADA Integration to meet effluent standard as BOD < 10 mg/L, COD < 50 mg/L, TSS < 10 mg/L, TN < 10 mg/L, TP < 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission	As per the NGT norms the Total Suspended Solid (TSS) value should be TSS < 20 mg/L, hence we kindly request to consider TSS < 20 mg/L instead of TSS < 10 mg/L (In-support of this we are accompanying order copy of the National Green Tribunal Principal Bench, New Delhi date of hearing 30.04.2019)	Refer Addendum-1
80			Request to add Helical Hybrid Blowers in addition to Turbo Blowers & conventional Tri /Twin Lobe Blowers for all ongoing 9 projects of BWSSB KWSDRP WBS I to WBS V	Tender Conditions Prevails.
81	Vol II, 5.19.1 for Works-A	pH - 6.5-7.5 BOD- 350 mg/l COD-800 mg/l TSS-450 mg/l VSS-360 mg/l TKN-70 mg/l NH4-N- 45 mg/l Total Phosphorous- 7 mg/l	The influent parameters which are mentioned are not as per CPHEEO. Pl confirm the values that to be considered for design for indvidual STP.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
82	Vol II, 1.3 Components List for Works-A,		Is the provision of a Disc Cloth Filter, Ultrafiltration (UF) system, and Odour Control Unit mandatory for every individual STP?	Tender Conditions Prevails. The requirement of a Disc Filter, Ultrafiltration (UF) system, and Odour Control Unit for respective WwTPs shall be as defined in the tender document.
83	Vol II, 1.3 Components List for Works-A,	EA Process, or IFAS Process, or MBBR Process, or SBR Process, incorporating biological nitrification, de-nitrification, and phosphorus removal. All these process options shall be followed by Disc filters, Chlorine Disinfection and Mechanical Sludge Dewatering. As defined.	UF system is not mentioned here. Pls confirm the scope of UF.	Tender Conditions Prevails. The requirement of a Ultrafiltration (UF) system for respective WwTP shall be as defined in the tender document.
84	Vol II, 5.14.6 Tanker Filling Station	Contractor shall provide the facilities for tanker filling by installing dedicated "treated water transfer pumps" as specified in Paragraph 5.19.	Is Tanker Filling Station required at every STP?	Tender Conditions Prevails. Yes. The requirement shall be as defined in the Tender document.
85		Further the WwTP locations (refer Paragraph 5.19.) where the reuse facilities are not specified, then a dedicated ultrafiltration unit with disinfection facilities shall be installed for the tanker filling station of the WwTP (Capacity shall be same as treated water transfer pumps) to ensure the treated water meets all the time stringent re-use standards and non-detectable fecal coliform levels before being loaded into the tankers. For capacity of treated water transfer pumps refer Paragraph 5.19.	We presume that UF treated water would be used in Filling Stations.	Tender Conditions Prevails. Yes. The requirement shall be as defined in the Tender document.
86	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 10 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic &Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Conditions Prevails.
87	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 12 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic &Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Conditions Prevails.
88	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 22 for Works-A		Kindly include EKOTON makefor the Fine Bubble (LDPE) Diffusers in the approved make list. Please Confirm for indvidual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
89	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 24 for Works-A		Kindly include Euroteck/EKOTON makefor the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
90	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 26 for Works-A		Kindly include Euroteck/EKOTON makefor the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
91	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 40 for Works-A		Kindly include Euroteck/MITA make for the Disc Filters in the approved make list. Please Confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
92	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 5 for Works-A		Kindly include Screw Press/ Belt Filter Press for Dewatering of sludge Euroteck/Ekoton Makewhich consumes less power. Please Confirm for Individual STP	Not Acceptable, Tender Condition Prevail.
93	General		Kindly include Sub Surface Aerators in Aeration Zone. Aerators are much more energy efficient and Operation & Maintenance is easy compared to Diffused Aeration. Please Confirm. Further we request to add AIRE-O2 make for the Sub Surface Aerators in the approved make under Approved make list Sub Surface Aerator as an additional item.	Tubular type Air Diffuser system is only allowed, other type of Diffuser for Aeration zone is Not Acceptable, Tender Condition Prevail.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
94	General		Kindly include Integrity Municipal Systems (IMS)- I-BOx® Make for Odor control Unit. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
95	General		Request you to include helical hybrid blowers which are energy efficient and high speed blower very well suited in the aeration	Tender Conditions Prevails.
96		Biomedia-Virginmedia-Extuded	Agreed	Tender Conditions Prevails.
97		Media shape- Cylindrical with internal fins	Agreed	Tender Conditions Prevails.
98		Media Life-(Min) 20 years	Agreed	Tender Conditions Prevails.
99		Solid Loading Rate-Max 45 g/m2	Request to amend for Max 25g/m2	Tender Conditions Prevails.
100		Maximum effective surface Area500m2/m3	Agreed. However request to consider higher surface area like 600-650 also	Tender Conditions Prevails.
101		Tenderer must submit MOU with MBBR technology provider under this contract	Request to abolish the clause for MBBR technology	Tender Conditions Prevails.
102		Total HRT-18Hrs	It should be based on process design.	Tender Conditions Prevails.
103		Technology provider shall provide the evidence that he has successfully supplied the technology for atleast 52MLD-1 nos or 26MLD-2nos with MBBR technology and should be in successful operation for a period of one year as per section 3.1.2(b) (i) Experience in Execution of STPs.	Cooldeck as a leading manufacturer in India and prestigious supplier to major client like Triveni/ Ionexchange/ Therma x/ L&T/ RoChem/. We have more than 2000 reference for MBBR media supply to Municipal and other major industry. Presently we do not have reference for the successful operation for a period of one year. Request you to waive off the section 3.1.2 (b) (i) for technology provider to support the Make in India manufacturer.	Not Acceptable. Tender Conditions Prevails.
104	Volume-2 /Section-7, Part 5 -30	**Influent Wastewater Characteristics** pH — 6.5-7.5 BOD — mg/L — 350 COD — mg/L — 800 TSS — mg/L — 450 VSS — mg/L — 360 TKN — mg/L — 70 NH4-N — mg/L — 45 Total Phosphorus — mg/L — 7	As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Please confirm.	The design influent parameters requirement shall be as defined Part 5, Cl.no. 5.19.1, "TSPS & WwTPs Design / Sizing Criteria".
105	Volume-2 / Section-7, Part 5 - 30	**Influent Wastewater Characteristics** COD — mg/L — 800	We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being non-biodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at the Works. Please confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.
106	Volume-1 / Page 16 of 233	Construction Experience- Pipeline The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 year as on date of bid submission involving minimum length of 25 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Please confirm.	Not Acceptable. Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
107	Volume-1 / Page 16 of 233	(vi) Construction Experience Trenchless Works The Tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia. and above MS casing pipe of minimum 100 meters in any one year during the last 5 year as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Please confirm.	Not Acceptable. Tender Conditions Prevails.
108	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) **3.1.2. (b) (i) Experience in Execution of WwTPs** The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of minimum 4 MLD capacity and above, with Biological Nutrient Removal (BNR) technology of process like, A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of One year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified— excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Please confirm.	Refer Addendum-1
109	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 4 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Please confirm.	Yes, technology provider shall also abide to the PQ required defined in Clause 3.1.2. (b) i
110	Volume-2 / Section-7, Part 5 - 49	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Please confirm.	Tender Conditions Prevails.
111	Volume-2 / Section-7, Part 5 - 50	HRT at average flow: 24 Hrs.	Hydraulic Retention Time (HRT) is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
112	Volume-2 / Section-7, Part 5 - 50	Maximum Decanter Weir loading rate: 120 m3/h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 m³/h/m (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Please confirm.	Tender Conditions Prevails.
113	Volume-2 / Section-7, Part 8 - 99	Decanters (For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Please confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
114	Volume-2 / Section-7, Part 8 - 99	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
115	Volume-2 / Section-7, Part 5 - 51	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document— Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Please confirm.	Tender Conditions Prevails.
116	Volume-2 / Section-7, Part 8 - 82 to Part 8-101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Please confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted. Refer Addendum-1.
117	Volume-2 / Section-7, Part 8 - 90	<table><tr><th>Si.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Please confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
118	Volume-2 / Section-7, Part 8 - 150	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur, 10 Komaghatta, 13 MLD Byrathi Kanne. Therefore, we assume that the tenderer can propose M/s. Yucheon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
119	Volume-2 / Section-7, Part 5 - 54	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
120	Volume-2 / Section-7, Part 1 -9 Volume-2 / Section-7, Part 5-30	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD_3 at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails. The requirement shall be as defined in the Tender document.
121	Volume-2 / Section-7, Part 8 - 125	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
122	Volume-2 / Section-7, Part 8 - 127	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm	Tender Conditions Prevails.
123	Volume-2 / Section-7, Part 8 – 128	….. the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
124	Volume-2 / Section-7, Part 8 - 138	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Please confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
125	Volume-2 / Section-7, Part 5 - 54	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm.	Tender Conditions Prevails.
126	Volume 2, Page no. TECHNICAL SCHEDULE X-2	a) Energy Consumption for TSPS, WwTP without Reuse PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided in recent tender of BOMMANAHALLI ZONE in 110 village areas for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
127	Volume-2 / Section-7, Part 5 - 53	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Please confirm.	Tender Conditions Prevails.
128	Volume-2 / Section-7, Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Please confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.
129	Volume-2 / Section-7, Part 5 - 38/42/47	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Please confirm.	Tender Conditions Prevails.
130	Volume-2 / Section-7, Part 7 - 54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Please confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
131	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Please confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
132	Volume-2 / Section-7, Part 7 - 56	Historian Software	As alarms and trends are already stored within the computer-based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Please confirm.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
133	15 of 233 Vol – I	Particular Construction Experience (a) (1) Contracts of Similar Size and Nature: The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has it has successfully completed design and construction of at least One (1) No.WwTP contract of value not less than INR 15.68 Crores in last Five (5) financial years.	We understand Wastewater Treatment Plant (WWTP) and Sewage Treatment Plant (STP) both are similar, Bidder who is under possession of STP experience shall also be considered a qualified. Also allow the said experience in last Ten (10) Financial years to encourage wider participation and foster a more competitive bidding process Please confirm.	Tender Conditions Prevails.
134	15 of 233 Vol – I	(b)Experience in Key Activities: During the last 5 years as on date of Bid submission.	Kindly allow the said experience in last Ten (10) Financial years to encourage wider participation and foster a more competitive bidding process Please confirm.	Not Acceptable. Tender Conditions Prevails.
135	15 of 233 Vol – I	Tenderer must submit the MOU with Technology provider for proposed process technology (SBR/IFAS/MBBR) under this contract, failing which the Tender will be considered as technically non-responsive	We understand Bidder who have sufficient experience of Design, supply, installation and commissioning of Sewage treatment Plant on offered technology and has successfully installed same capacity and plant is under operation & Maintenance. In that case Bidder doesn't require to make MOU for the offered technology. Please confirm.	If any bidder proposes to use their own in-house SBR/IFAS/MBBR technology, they must clearly demonstrate that the technology is bidders proprietary and has been successfully implemented as defined in Tender Clause No. 3.1.2 (b)(i). The bidder shall also confirm that the SBR Decanter including SCADA system / IFAS media system / MBBR media system, has been entirely designed and manufactured by bidder and has not been sourced from any third-party technology provider. Supporting documents including performance certificates, client references, and detailed documentation shall be submitted along with the bid. In such case, MoU with a third-party technology provider is not required. Refer Addendum-1
136	18 of 233 Vol – I	(d) The tenderer who have applied for corporate debt restructuring (CDR)/ strategic debt restructuring (SDR)/ facing recovery proceeding from Financial Institution/ facing winding up proceedings / those under BIFR in the last 5 Financial Years (i.e.,2019-20 to 2023-24). In this regard, the Tenderer shall submit along with tender, an affidavit along with certificate of statutory Auditor that the Tenderer is not under CDR/SDR/ not facing recovery proceeding from Financial Institutions / not facing winding up proceedings / not under BIFR need to be submitted by the tenderer.	We would like to bring to your kind notice that CDR/SDR provision are no more relevant as the same repealed vide RBI notification no. RBI/2017-18/131, DBR.No.BP.BC.101/21.04.048/2017-18 dated 12th Feb 2028. Notification is attached herewith. We understand bidder can submit the affidavit for the same with RBI notice. Please confirm.	Tender Conditions Prevails.
137	19 of 233 Vol – I	3.1.5 Equipment Capabilities Availability by owning at least 50% of the required specified Key and Critical equipment for the above work. The remaining 50% can be deployed on lease/hire basis for all works	We request kindly consider a relaxation in the requirement to provide RC book copies for leased/hired vehicles at the time of bid submission. Suggestion/Request for Amendment: It is requested that the submission of RC book copies for leased/hired vehicles be allowed at the time of award or prior to mobilization, instead of at the bid stage. Alternatively, a declaration from the vehicle owner should be deemed sufficient during the bidding process.	Declaration from the vehicle owner for the leased / hired vehicles will be considered for bidding process only. However, the tenderer has to submit all the copies pertaining to leased/ hired vehicle before award of contract. Tender Conditions Prevails.

Sl.No.	Equipment Type and Characteristics	Minimum Number Required (Nos.)
1	Crane or Hydra (10 Ton)	4
2	Loader cum back hoe (0.7 Cum)	4
3	Excavators (1.0 Cum)	4
4	Tipper/Dumper Trucks (10 Cum)	4
5	Road cutting machine	2
6	Compressor	1

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>138</td><td></td><td></td><td>Inclusion of Advnced Air Blower Technology
We request that Positive Displacement Rotary Helical Hybrid Air Blowers be considered in addition to the currently listed blower types (Twin Lobe/Tri Lobe/Turbo). This technology is highly efficient, sustainable, and particularlu suited to Indian operating environments. It is a proven, 100% make-in-India solution, designed to hadle variable flow and pressure conditions effieciently.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>139</td><td></td><td></td><td>Inclusion of free floating IFAS carriers with PU Foam and activated carbon
We propose the use of PU foam-based IFAS carriers impregnated with activated carbon for STP upgrdation. Below are technical specifications:
<table><tr><th>Items</th><th>Unit</th><th>Values</th></tr><tr><td>MOC</td><td></td><td>Poly Urethane Fom impregnated with activated carbon.</td></tr><tr><td>Medai Surface Area</td><td>M3/m²</td><td>More than 20000 m² /m³ (BET measurement)</td></tr><tr><td>Media filling ratio</td><td>%</td><td>12-15% of the total volume of IFAS reactor</td></tr><tr><td>Shape</td><td></td><td>Cuboid</td></tr><tr><td>Size</td><td></td><td>20x20x7mm</td></tr><tr><td>Media life</td><td></td><td>Minimum 10years</td></tr></table></td><td>Tender Conditions Prevails.</td></tr>
<tr><td>140</td><td>Volume-2 / Section-7, Part 5 -30</td><td><table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>pH</td><td></td><td>6.5-7.5</td></tr><tr><td>BOD</td><td>mg/L</td><td>350</td></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr><tr><td>TSS</td><td>mg/L</td><td>450</td></tr><tr><td>VSS</td><td>mg/L</td><td>360</td></tr><tr><td>TKN</td><td>mg/L</td><td>70</td></tr><tr><td>NH4-N</td><td>mg/L</td><td>45</td></tr><tr><td>Total Phosphorus</td><td>mg/L</td><td>7</td></tr></table></td><td>As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard.
We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable.
Please confirm</td><td>The design influent parameters requirement shall be as defined Part 5, Cl.no. 5.19.1, "TSPS & WwTPs Design / Sizing Criteria".</td></tr>
<tr><td>141</td><td>Volume-2 / Section-7, Part 5 -30</td><td><table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr></table></td><td>We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being non-biodegradable.
Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at the Works.
Please confirm.</td><td>Bidder may consider Non-biodegradable COD as per the bidder design.</td></tr>
<tr><td>142</td><td>Volume-1 / Page 16 of 233</td><td>Construction Experience- Pipeline
The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 year as on date of bid submission involving minimum length of 25 Km.</td><td>We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards.
In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively.
Please confirm.</td><td>Not Acceptable. Tender Conditions Prevails.</td></tr>
</table>

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
143	Volume-1 / Page 16 of 233	(vi) Construction Experience Trenchless Works The Tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia. and above MS casing pipe of minimum 100 meters in any one year during the last 5 year as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Please confirm.	Not Acceptable. Tender Conditions Prevails.
144	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPs The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of minimum 4 MLD capacity and above, with Biological Nutrient Removal (BNR) technology of process like, A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of One year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified—excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Please confirm.	Refer Addendum-1
145	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 4 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Please confirm.	Yes, technology provider shall also abide to the PQ required defined in Clause 3.1.2. (b) i
146	Volume-2 / Section-7, Part 5 -49	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Please confirm.	Tender Conditions Prevails.
147	Volume-2 / Section-7, Part 5 -50	HRT at average flow: 24 Hrs.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Please confirm	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
148	Volume-2 / Section-7, Part 5 -50	Maximum Decanter Weir loading rate: 120 m3/h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 m³/h/m (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Please confirm	Tender Conditions Prevails.
149	Volume-2 / Section-7, Part 8 -99	Decanters (For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Please confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
150	Volume-2 / Section-7, Part 8 -99	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
151	Volume-2 / Section-7, Part 5 -51	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document—Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Please confirm.	Tender Conditions Prevails.
152	Volume-2 / Section-7, Part 8 -82 to Part 8-101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Please confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted. Refer Addendum-1.
153	Volume-2 / Section-7, Part 8 - 90	<table><tr><th>Si.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Please confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
154	Volume-2 / Section-7,	Preferred Makes/ Manufactures for electromechanical equipments	Due to the smaller scale of plant few electrical and mechanical equipment's need more options for manufacturer as listed manufacturers are not catering to the requirements of this project. Please confirm that we can provide suitable alternate reputed make as suitable.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
155	Volume-2 / Section-7, Part 5 -54	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
156	Volume-2 / Section-7, Part 1 -9 Volume-2 / Section-7, Part 5-30	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD_3 at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
157	Volume-2 / Section-7, Part 8 -125	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
158	Volume-2 / Section-7, Part 8 - 127	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm	Tender Conditions Prevails.
159	Volume-2 / Section-7, Part 8 – 128	….. the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender.	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
160	Volume-2 / Section-7, Part 8 - 138	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Please confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
161	Volume-2 / Section-7, Part 5 -54	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm.	Tender Conditions Prevails.
162	Volume 2, Page no. TECHNICAL SCHEDULE X-2	**a)Energy Consumption for TSPS, WwTP without Reuse** PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided in recent tender of BOMMANAHALLI ZONE in 110 village areas for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Please confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
163	Volume-2 / Section-7, Part 5 -53	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Please confirm.	Tender Conditions Prevails.
164	Volume-2 / Section-7, Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Please confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.
165	Volume-2 / Section-7, Part 5 -38/42/47	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Please confirm.	Tender Conditions Prevails.
166	Volume-2 / Section-7, Part 7 -54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Please confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
167	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Please confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.

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168	Volume-2 / Section-7, Part 7 -56	Historian Software	As alarms and trends are already stored within the computer-based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Please confirm.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
169	Volume-2 Section-7 Clause - 5.10 pg. No. 5	Design of Plant Layout Admin building shall be provided with three side glass capsule Elevator having capacity to carry minimum Eight (8) People at a time	Please confirm if the lift is required for G+1 building also the size seems to be large.	Tender Conditions Prevails. The requirement shall be as defined in the Tender document.

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